

SECTION 10 11 16
MARKERBOARDS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section specifies markerboards (whiteboards and glassboards) and related items.
- B. Markerboards shall be factory assembled.
- C. Assemble markerboards into a single unit.

1.2 RELATED WORK

- A. Section 01 81 13, SUSTAINABLE DESIGN REQUIREMENTS for additional LEED requirements.
- B. Section 01 81 19, INDOOR AIR QUALITY REQUIREMENTS for VOC limit.
- C. Color of aluminum anodic coating markerboard writing surface: Section 09 06 00, SCHEDULE FOR FINISHES.

1.3 QUALITY ASSURANCE

- A. Markerboards shall be the products of one manufacturer.
- B. Product Certifications: Provide GREENGUARD Indoor Air Quality Certified for markerboards.

1.4 SUBMITTALS

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES.
- B. Shop Drawings: Identifying all parts by name and material and showing design, construction, installation, anchorage and relation to adjacent construction.
- C. Manufacturer's Literature and Data:
 - 1. Markerboard.
- D. Samples:
 - 1. Markerboard writing surface, 300 by 300 mm (six by six inches), each color, mounted on backing.
 - 2. Integrally colored anodized aluminum, 300 mm (six inch) length.
 - 3. Each accessory (after approval, may be used in the work).
- E. LEED Submittals:
 - 1. Credits MR 4.1 & 4.2: For products having recycled content, documentation indicating percentages by weight of post-consumer and pre-consumer recycled content.
 - a. Include statement indicating costs for each product containing recycled content.

2. Credit EQ 4.1: Manufacturer's product data for installation adhesives and sealants applied on site and within the vapor barrier, including printed statement of VOC content (in g/L).
3. Credit EQ 4.4:
 - a. Composite wood manufacturer's product data for each composite wood product used indicating that the bonding agent contains no urea formaldehyde.
 - b. Adhesive manufacturer's product data for each adhesive used indicating that the adhesive contains no urea formaldehyde.

1.5 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
- B. American Society for Testing and Materials (ASTM):
B221/B221M-06.....Aluminum and Aluminum Alloy Extruded Bars, Rods,
Wire, Shapes and Tubes
- C. Porcelain Enamel Institute (PEI):
PEI-1002Manual and Performance Specifications for
Porcelain Enamel Writing Surfaces
- D. GREENGUARD Environmental Institute (GEI):
.....GREENGUARD Indoor Air Quality Certified

1.6 WARRANTY

- A. Special Warranty for Porcelain-Enamel Face Sheets: Manufacturer's standard form in which manufacturer agrees to repair or replace porcelain-enamel face sheets that fail in materials or workmanship within specified warranty period.
 1. Failures include, but are not limited to, the following:
 - a. Surfaces lose original writing and erasing qualities.
 - b. Surfaces become slick or shiny.
 - c. Surfaces exhibit crazing, cracking, or flaking.
 2. Warranty Period: 50 years from date of Substantial Completion.
- B. Provide two year warranty for glassboards against discoloration due to cleaning or staining.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Basis-Of-Design Product: Subject to compliance with requirements, provide EISYS/BORKS VIP SERIES, or approved equivalent.
- B. Products:
 1. Whiteboard.
 2. Glassboard: Unframed, gray background.

3. Glassboard: Framed, gray background.

C. LEED Submittals:

1. Recycled Content of Steel Products: Provide steel products with minimum 25% post-consumer recycled content.
2. Provide installation adhesives, sealants, paints, and coatings applied on site and within the vapor barrier, that comply with VOC limits outlined in Division 01 Section "Indoor Air Quality Requirements."
3. Do not use composite wood or agrifiber products or adhesives that contain urea-formaldehyde resin

2.2 WHITEBOARDS

A. Whiteboards: Dry-wipe whiteboard for marker pens and magnets.

1. Face Sheet: Scratch-resistant vitreous enamel steel fused twice at 800 degrees C.
2. Core: 10 mm particleboard laminated to face sheet.
3. Backing: Aluminum foil, laminated to core.
4. Sizes: As indicated on Drawings.
5. Frame Profile: Manufacturer's standard.
6. Top and Bottom Frames: Natural anodized extruded aluminum 2mm gage, 60 mm high. Face plate shall be 1 mm less than rail length. Rail shall be punched to accept wall anchors according to local codes.
 - a. Sliding Track: Top frame shall have 1 sliding track for hanging flexible board, flip charts or projection boards.
 - b. Side profiles: Natural anodized extruded aluminum, 2 mm gage, 6 mm wide, complete with mounting sets for concealed wall attachment.
7. Accessories: Provide one accessory pack for each markerboard. Include 4 dry markers, 1 penholder, 1 felt eraser, 1 whiteboard cleaner, 1 cloth and 12 magnets.
8. Color: White.

2.3 GLASSBOARDS-UNFRAMED

A. Glassboards: Dry-wipe glassboards for dry erase markers.

1. Face Sheet: Safety glass toughened with matt cut glass edges.
2. Range:
 - a. Thickness: 6 mm.
 - b. Maximum dimensions: 2000 mm x 1200 mm.
3. Backing: Gray enameled serigraphed backing.
4. Manufacturing Sizes: As indicated on Drawings.
5. Manufacturing Tolerances:
 - a. Deflection tolerance: 2 mm/2m.

- b. Tolerance on sizes: +0-2mm.
- c. Max length/width ratio 1/10.
- d. Minimum dimensions (mm) 900 mm x 600 mm.
- 6. Frame Profile: Frameless board.
- 7. Accessories: Provide an accessory pack for each glassboard.
Includes 4 dry markers, 1 eraser, cleaner & cloth.
 - a. Penshelf Acrylic: 12 inches wide.
 - b. Penshelf Aluminum: Up to the full width of unframed or framed glassboards.
- 8. Color: Gray.
 - a. A color difference of $E^*=1.5$ (C.I.E. La^*b) measured on the surface of the glass is acceptable between 2 panes with the same color enamel.

2.4 GLASSBOARDS-FRAMED

- A. Glassboards: Dry-wipe glassboards for dry erase markers.
 - 1. Face Sheet: Safety glass toughened with matt cut glass edges.
 - 2. Range:
 - a. Thickness: 6 mm.
 - b. Framed Glass Thickness: 20 mm.
 - c. Maximum dimensions: 1200 mm x 1305 mm.
 - 3. Backing: Gray enameled serigraphed backing.
 - 4. Manufacturing Sizes: As indicated on Drawings.
 - 5. Manufacturing Tolerances:
 - a. Deflection tolerance: 2 mm/2m.
 - b. Tolerance on sizes: +0-2mm.
 - c. Max length/width ratio 1/10.
 - d. Minimum dimensions (mm) 1200 mm x 1305 mm.
 - 6. Frame Profile: Matte anodized aluminum frame. The top rail features 1 sliding track for hanging component boards.
 - 7. Accessories: Provide an accessory pack for each glassboard. Includes 4 dry markers, 1 eraser, cleaner & cloth.
 - a. Penshelf Acrylic: 12 inches wide.
 - b. Penshelf Aluminum: Up to the full width of unframed or framed glassboards.
 - 8. Color: Gray.
 - a. A color difference of $E^*=1.5$ (C.I.E. La^*b) measured on the surface of the glass is acceptable between 2 panes with the same color enamel.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Install units in accordance with the manufacturer's installation instructions, use concealed fasteners.
- B. Inspect surfaces and related construction to receive units. Partitions shall have reinforcing to receive fasteners. Verify type and placement of reinforcement.
- C. Do not proceed with the installation until reinforcement is in place and surfaces are flat.
- D. Shop assemble units as specified by the manufacturer.

3.2 INSTALLATION OF MARKERBOARDS

- A. Attach concealed clips, hangers, and grounds to wall surfaces and to markerboards with fasteners at not more than 406 mm (16 inches) o.c. Secure both top and bottom of markerboards to walls.

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